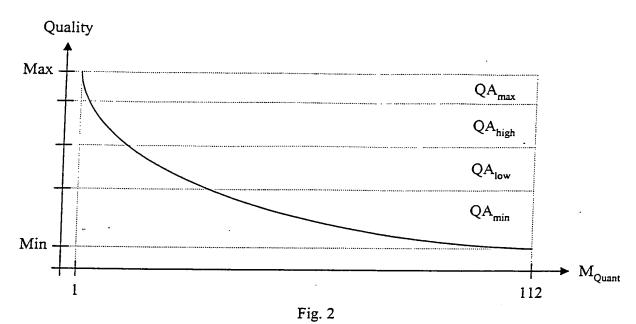
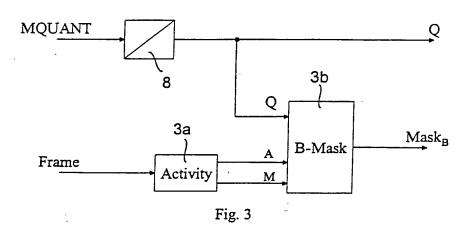


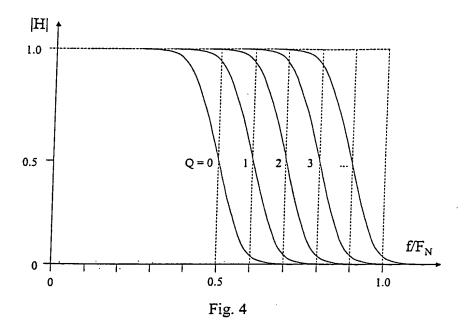


 $\left(\frac{\pi(i)}{2\pi}\right)$





~ 2



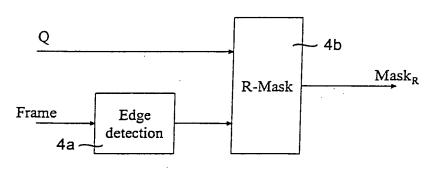


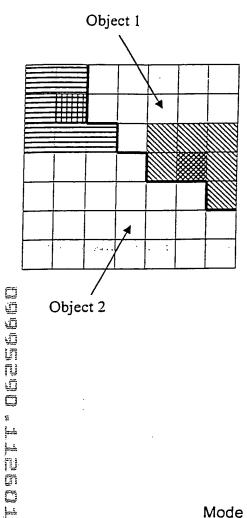
Fig. 5

for
$$QA_{min}$$
, QA_{low} and QA_{high}

Filter =
$$\begin{bmatrix} 1 & 2 & 1 \\ 2 & W & 2 \\ 1 & 2 & 1 \end{bmatrix}$$

$$W = \begin{cases} 4 \text{ ; for } QA_{min} \\ 8 \text{ ; for } QA_{low} \\ 16 \text{ ; for } QA_{high} \end{cases}$$

for
$$QA_{max}$$





Pixels contributing to the filtering of

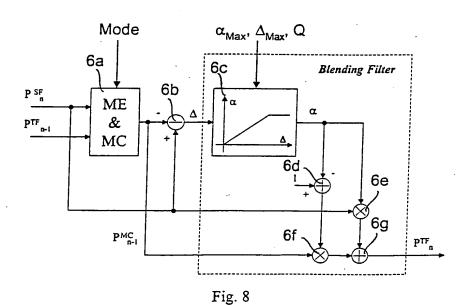


$$F = \begin{bmatrix} f_{-1,-1} & f_{0,-1} & f_{1,-1} \\ f_{-1,0} & f_{0,0} & f_{1,0} \\ f_{-1,1} & f_{0,1} & f_{1,1} \end{bmatrix}$$

$$P^{\textit{new}}[p][l] = \frac{\sum\limits_{j=-l}^{l}\sum\limits_{i=-l}^{l}P[p+i][l+j]\cdot f[i][j]\cdot \delta_{R}}{\sum\limits_{j=-l}^{l}\sum\limits_{i=-l}^{l}f[i][j]\cdot \delta_{R}}$$

with: $\delta_R = \begin{cases} 1 & \text{if} \quad P[p+i][l+j] \text{ and } P[p][l] \text{ in same region} \\ 0 & \text{otherwise} \end{cases}$

Fig. 7



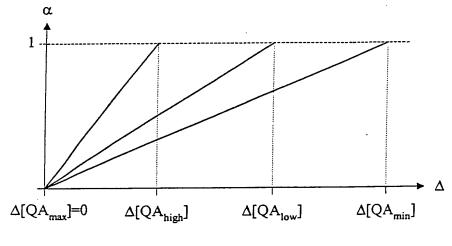


Fig. 9